



How long does it take to get from  $(x_1, y_1)$  to  $(x, y)$  ?

$$\text{distance} = \text{velocity} \cdot \text{time}$$

so

$$\text{time} = \frac{\text{distance}}{\text{velocity}}$$

$$\text{distance} = \sqrt{(x-x_1)^2 + (y-y_1)^2}$$

$$\text{velocity (along the line)} = \sqrt{x_{mov}^2 + y_{mov}^2}$$

Find these values and plug it in here